#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-013596 Address: 333 Burma Road **Date Inspected:** 29-Mar-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Li Yang No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No **Weld Procedures Followed:** Yes No N/A Yes N/A **Qualified Welders:** No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: OBG Segment** 

## **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Dan Hernandez was present during the times noted above to observe the fit up, welding and related activities associated with the fabrication of the San Francisco Oakland Bay Self Anchored Suspension Bridge at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

**OBG Trial Assembly Yard** 

Segment 7BE

This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SSD27-PP051-048. The welder is identified as #220066 and was observed welding in the 1G (flat) position using approved Welding Procedure Specification WPS-B-T-2231-B-U2a-F.

This QA Inspector observed Base Metal repair using the Shielded Metal Arc Welding (SMAW) in progress at locations of removed fit up plates along the exterior of the Bottom Plate to Side Plate CJP splice. The welder is identified as #045196 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G (4F)-FCM-repair-1 for WR11052.

Segment 7BW

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This QA Inspector observed Flux Cored Arc Welding (FCAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SSD27-PP051-048. The welder is identified as #220066 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-T-2233-T.

# Segment 7CE

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as CA040-004. The welder is identified as #067904 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G (4F)-FCM-repair for CWR 1227 UT repair at Y location 6895mm.

#### Segment 7BE

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SEG036-047. The welder is identified as #037996 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G (4F)-FCM-repair for CWR 1325 UT repair at Y location 3300mm.

This QA Inspector observed fit up and tack welding of the Longitudinal Diaphragm at PP52 east, cross beam side.

### Segment 7BW/7CW

This QA Inspector observed the removal of the remaining portions of fit up plates by arc gouging from the interior of the Deck Plate along the segment transverse CJP splice.

#### Segment 7BE/7CE

This QA Inspector observed ABF personnel performing Ultrasonic Testing of the Deck Plate Segment transverse CJP splice and Side Plate transverse splice, bike path side. D scan was performed.

This QA Inspector observed ZPMC personnel performing Magnetic Particle Testing (MT) on the Side Plate WT stiffener hold back fillet welds, bike path side.

ZPMC Quality Control (QC) Inspector is identified as Zhong Yong Gang. QA Inspector observed QC Inspector verify welding parameters. The welding variables recorded by QC appeared to comply with the Applicable WPS.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

## **Summary of Conversations:**

No relevant conversations.

### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

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remedial efforts please contact Eric Tsang, 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Hernandez, Dan	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer